

MER Shift Reports

STS-107

Day 11 Shift 1

STS-107 (OV-102, FLT 28)

1/26/03

11:30 AM

On-Orbit Shift Report

The HYD/WSB Systems are operating normally and all parameters are within their expected ranges. There have been no additional circulation pump runs for thermal conditioning or bootstrap re-pressurization. The HYD/WSB group is not working any issues at this time.

Total Circ Pump Runs

Thermal	Accumulator Recharges
Sys 1: 1 for elevon park	0
Sys 2: 0 runs	0
Sys 3: 0 runs	0

Charles A. Rittrivi

HYD/WSB SSE

Orbiter Thermal

STS-107 MER TCS Thermal 1st Shift Report

January 26, 2003 11:10AM, 026/17:10 GMT (10/01:31 MET)

All thermal systems are performing nominally and all subsystem temperatures are within acceptable limits.

Tim Davies / Dave Norman

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 12

SHIFT 1

All ECLSS systems performing nominally.

Events:

FES supply water dump is in progress, commenced at MET 009/21:21

Consumables:	Supply water	462.5 lb.
	Waste water	42.1 lb.
	Orbiter Nitrogen	178.0 lb.

Shift Leader
GMT 026/1700

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD11; 1st SHIFT REPORT

GMT: 026:17:00

EVENTS:

Red Team awake.

MMACS requested support to find out how many straws were flown up. Straw Pack P/N SED48101670.

- o Dale Gentry indicated that the Surgeon should have a Food Installation Drawing that lists quantity and location of straws.
- o The following information was found by Dale and passed on to MMACS via the FCE console:

MF14H Bottom Tray	1 Pack Assy (50 straws per Assy)	
Airlock Sealing Bag, 2 trays	5 Pack Assys	
MF57A, Center Locker	6 Pack Assys, MF57A, Starboard Front	1 Pack Assy
MF57A, Starboard back	1 Pack Assy.	

FORWARD ACTIONS:

Monitor CHITS for activity.

CHITS (Monitoring / Working / Waiting for Closure):

STS0013 PGSC Power Supply Temperature Check CHIT (was TS0016)

- Contacted MMACS to confirm this test procedure is going up to crew. Confirmed procedure is going up on Blue Team's Flight Day 12 Execute package as message 166. It is an "EZ" activity and hence has no required timeline.

STS0010 Assess Feasibility of Performing SPACEHAB IFM 8.2 Contingency Air Duct Configuration

>>>THIS CHIT IS CLOSED<<<

STS0012 INFO ONLY – SpaceHab Water Inspection/Removal and Continuity Check

>>>THIS CHIT IS CLOSED<<<

HARDWARE STATUS:

- No additional issues with the Hasselblad [70mm] cameras have been reported on this shift. Reference anomaly reports **MMACS 001A** and **MMACS 002B** for historical information.

There have been no further FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.



Rob Rowland
Flight Crew Equipment- GFE/CFE

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 11 SHIFT 1
GMT 026/17:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

FC/PRSD – The sixth on-orbit fuel cell purge was performed at 026/02:42 GMT (09/11:02 MET). During the 40.5-hour interval the approximate performance decay was 0.09 vdc in fuel cell 1, 0.17 vdc in fuel cell 2, and 0.15 vdc in fuel cell 3.

The fuel cell 1 & 3 alternate water line temperatures continue to be erratic, indicating slight leakage of warm fuel cell water through the check valves.

OMS/RCS – Now in LOMS interconnect, B regs, B heaters. Interconnect usage is currently at 2.922 % out of the left side. Will remain on the LOMS until end of mission

EPDC – The only problem being worked by EPDC is the intermittent “sluggish” AC2 phase B current response. The plots for the last 24 hours indicate that there were multiple, intermittent occurrences of sluggish response on AC2 by phase B.

All monitored voltage and current measurements were nominal. The 24 hour plots and the strip chart recorder data was reviewed with no unusual signatures noted.

Walter Scott
ESD Team Lead

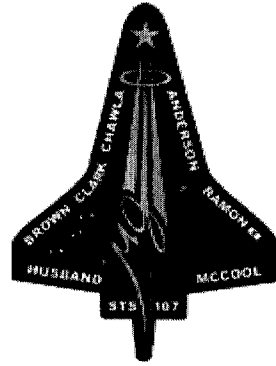
AVIONICS
FLIGHT CONTROL / GNC DAILY REPORT

01/26/03

STS-107
Daily Report
Flight Day 11

Flight controls and GNC systems are performing nominally. Last IMU align was at 025/00:14 GMT

Chuck Beatty
Jan. 26, 2003



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/26/2003

GMT: 026/17:00:00

Shift: 1st

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Paul Relyea

Signature: _____

Paul H. Relyea

STS-107
MER Comm and Track Shift Report
GMT 26:12:00
Shift 1

All comm and track systems are operating nominally.

Martha May

MER Comm & Track

MER Shift Reports

STS-107

Day 11 Shift 2

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD11; 3rd SHIFT REPORT

GMT: 027:01:00

EVENTS:

Red Team / Blue Team (reminder of shift) awake.

MMACS requested support to find out how many straws were flown up. Straw Pack P/N SED48101670.

- o The following information was found by Dale and passed on to MMACS via the FCE console:

MF14H Bottom Tray	1 Pack Assy (50 straws per Assy)
Airlock Sealing Bag, 2 trays	5 Pack Assys
MF57A, Center Locker	6 Pack Assys
MF57A, Starboard Front	1 Pack Assy
MF57A, Starboard back	1 Pack Assy.

No further issues associated with this hardware inquiry.

STS0013 PGSC Power Supply Temperature Check CHIT

- o Message 166 was uploaded to crew in Blue Team FD12 Execute Package, pertaining to CHIT procedures.
- o Per crew calldown, PLT asked if procedure was necessary, hesitant to pull out multimeter assy. since laptop and power supply were not too hot to touch. PCMCIA cards seemed hotter than laptop or power supply.
- o Battery Charging Ops. generates most heat is. Although this operation is not expected this mission, SSM stated the laptop undergoes minor Battery Charging Operation when PGSC battery level drops to 98%.
- o After some discussion with MMACS, Subsystem Manager (SSM), Dave Stephenson contacted the MMACS console for better rationale to pursue this action. Another CHIT may become necessary in the coming Flight Days to push for this temperature check procedure to be performed by the crew. Per SSM, temperature data will be helpful in determining if batteries will be flown in future flights.
- o ***SSM will work on Monday with Mech., PGSC, and FCE consoles to get CHIT out with additional rationale for PGSC Power Supply Temp. Check.***

FORWARD ACTIONS:

Monitor CHITs for activity.

CHITS (Monitoring / Working / Waiting for Closure):

STS0010 Assess Feasibility of Performing SPACEHAB IFM 8.2 Contingency Air Duct Configuration

>>>THIS CHIT IS CLOSED<<<

STS0012 INFO ONLY – SpaceHab Water Inspection/Removal and Continuity Check

>>>THIS CHIT IS CLOSED<<<

STS0013 PGSC Power Supply Temperature Check CHIT (was TS0016)

- See above for more information.

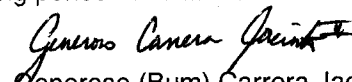
STS0014 INFO ONLY – Spacehab WSA Cleanup IFM

- IFM Attachment to vacuum any excess water from WSA area and seal the WSA cover for entry. This procedure will be scheduled to be worked by the crew at some point prior to entry. Procedure calls for use of Vacuum Cleaner, up to (2) Vacuum bags, and grey tape.

HARDWARE STATUS:

- No additional issues with the Hasselblad [70mm] cameras have been reported on this shift. Reference anomaly reports **MMACS 001A** and **MMACS 002B** for historical information.

There have been no further FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally..


Generoso (Bum) Carrera Jacinto III
Flight Crew Equipment- GFE/CFE

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 11 SHIFT 2
GMT 027/00:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

OMS/RCS

1. Left OMS GN2 Accumulator pressure is holding.
2. OMS and RCS system data has been reviewed up through 026/20:00 GMT. System performance continues as expected with no anomalies noted.
3. All vernier jet firing through 026/19:39:00.000 GMT have been reviewed. There have been no anomalous pulses.
4. 23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report.

EPDC - The only problem being worked by EPDC is the intermittent "sluggish" AC2 phase B current response. The plots for the last 24 hours indicate that there were multiple, intermittent occurrences of sluggish response on AC2 by phase B.

All monitored voltage and current measurements were nominal. The 24 hour plots and the strip chart recorder data was reviewed with no unusual signatures noted.

Tom Davies
ESD Team Lead

STS-107

OMS/RCS Day 11 Shift 2 Report

INITIATOR: Arrieta
DATE: January 26, 2003

MET: 10/06:57
GMT: 026/22:35
CENTRAL TIME: 4:35 PM CST

	Left		Right		Forward	
	Oxidizer	Fuel	Oxidizer	Fuel	Oxidizer	Fuel
PFS %	70.6	70.8	69.6	68.6	50.6	47.4
Interconnect Usage	3.383		3.991			

ORBIT

1. Left OMS GN2 Accumulator pressure is holding.

Data Review

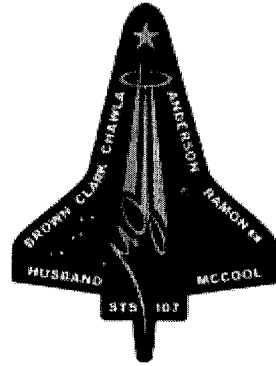
1. OMS and RCS system data has been reviewed up through 026/20:00 GMT. System performance continues as expected with no anomalies noted.
2. All vernier jet firing through 026/19:39:00.000 GMT have been reviewed. There have been no anomalous pulses.

RCS PRESSURIZATION LEG **FRCS: B** **LRCS: B** **RRCS: B**

AFT RCS INTERCONNECT CONFIGURATION: Left OMS Interconnect

23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

F1F		L1A	X	R1A	X
F2F		L3A	X	R3A	X
F3F		L1L		R1R	
F1L		L2L		R2R	
F3L	X	L3L	X	R3R	X
F2R		L4L		R4R	
F4R	X	L1U	X	R1U	X
F1D	X	L2U		R2U	
F2D	X	L4U		R4U	
F3D	X	L2D	X	R2D	X
F4D	X	L3D	X	R3D	X
F1U	X	L4D	X	R4D	X
F2U	X				
F3U	X				



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/26/2003

GMT: 027/01:00:00

Shift: 2nd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Ken Wood

Signature: 

Thermal

STS-107 MER Thermal 2nd Shift Report

027/01:00 GMT, 19:00 CST 01/26/2003

All thermal systems are performing nominally and all temperatures are within acceptable limits.

Work continues on defining the end of mission attitude sequence. The final "top earth, wing on the velocity vector" attitude is currently under review due to water usage concerns.

Bill Andrews/John Tran

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 12

SHIFT 2

All ECLSS systems performing nominally.

Consumables:	Supply water	511.0 lb.
	Waste water	32.0 lb.
	Orbiter Nitrogen	174.1 lb.

Shift Leader
GMT 027/00:29

MER Shuttle Safety Console
STS-107 FD 10 Shift 2
GMT 027:02:00

The MER Safety Console is not working any safety of flight issues.

Brandon Dick

MER Shift Reports

STS-107

Day 11 Shift 3

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD12; 1st SHIFT REPORT

GMT: 027:09:00

EVENTS:

Blue Teams working of experiments and the awakening of Red Team for handover.

FORWARD ACTIONS:

Monitor CHITs for activity.

CHITS (Monitoring / Working / Waiting for Closure):

STS0013 PGSC Power Supply Temperature Check CHIT (was TS0016)

- Message 166 was uploaded to crew in Blue Team FD12 Execute Package, pertaining to CHIT procedures.
- Per crew calldown, PLT asked if procedure was necessary, hesitant to pull out multimeter assy. since laptop and power supply were not too hot to touch. PCMCIA cards seemed hotter than laptop or power supply.
- Battery Charging Ops. generates most heat is. Although this operation is not expected this mission, SSM stated the laptop undergoes minor Battery Charging Operation when PGSC battery level drops to 98%.
- After some discussion with MMACS, Subsystem Manager (SSM), Dave Stephenson contacted the MMACS console for better rationale to pursue this action. Another CHIT may become necessary in the coming Flight Days to push for this temperature check procedure to be performed by the crew. Per SSM, temperature data will be helpful in determining if batteries will be flown in future flights.
- ***SSM will work on Monday with Mech., PGSC, and FCE consoles to get CHIT out with additional rationale for PGSC Power Supply Temp. Check..***

STS0014 INFO ONLY – Spacehab WSA Cleanup IFM

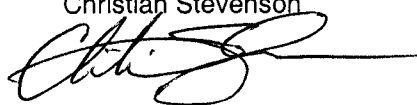
- IFM Attachment to vacuum any excess water from WSA area and seal the WSA cover for entry. This procedure will be scheduled to be worked by the crew at some point prior to entry. Procedure calls for use of Vacuum Cleaner, up to (2) Vacuum bags, and grey tape.

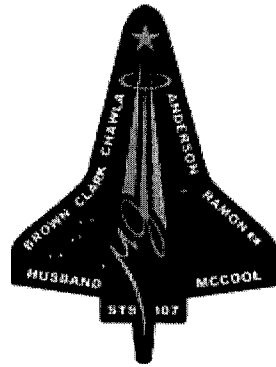
HARDWARE STATUS:

There have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.

Flight Crew Equipment- GFE/CFE

Christian Stevenson

 11/27/03



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/27/2003

GMT: 027/09:00:00

Shift: 3rd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Christopher Marchant

Signature: C Marchant

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 11 SHIFT 3
GMT 027/09:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics)
continue to function satisfactorily with the following notes or exceptions:

Richard Phillips
ESD Team Lead



Thermal 3rd Shift Report

STS-107, January 27, 2003
3 AM, MET 010/17:21 (27/09:00 GMT)

All temperatures are within acceptable limits and all thermal systems are operating nominally.

During the current attitude, top to earth tail on V, a main landing gear tire cooling is expected. If the cooling rate is more than predicted, TCS will recommend an attitude change at 12/00 MET from the planned tail on V to a starboard wing on V attitude.

Diana Coronado

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 12

SHIFT 3

All ECLSS systems performing nominally.

Consumables:	Supply water	581.3 lb.
	Waste water	64.5 lb.
	Orbiter Nitrogen	171.0 lb.

Shift Leader
GMT 027/08:49

MER Shuttle Safety Console
STS-107 FD 11 Shift 3
GMT 027:08:43

The MER Safety Console is not working any safety of flight issues.

Michael Etchells